UNCLASSIFIED

MSG DTG 111330Z APR 12

FROM COMMANDER, AMCOM, REDSTONE ARSENAL, AL //AMSAM-SFA//

SUBJECT – SAFETY OF FLIGHT (SOF), OPERATIONAL, ALL OH-58D SERIES AIRCRAFT, ENGINE SECOND STAGE TURBINE WHEEL, H-58-12-SOF-01

NOTE

This message is NOT for dissemination to any office or individual outside the US Government or US Government supporting agencies without the approval of the AMCOM Commander.

NOTE

This message is effective until rescinded or revised.

NOTE

This message is issued IAW AR 750-6 and has not been officially transmitted to units subordinate to addressees. Commanders of Army Commands (ACOM), Army National Guard (ARNG), Army Service Component Commands (ASCC), and Direct Reporting Units (DRU) will immediately retransmit this message to all subordinate units, activities or elements affected or concerned, and immediately confirm this re-transmittal by notification to the AMCOM SOF Compliance Officer at "safeadm@conus.army.mil".

NOTE

Commanders or Directors (not lower than the grade of Major General or civilian equivalent) of ACOMs, ARNG, ASCCs, and DRUs may authorize temporary exception from message requirements IAW AR 750-6, para 2-9 and 2-19. Exception may only occur when combat operations, matter of life or death in civil disasters, or other emergencies, are so urgent that they override the consequences of continued aircraft operation.

NOTE

Commanders unable to comply with the requirements of this message within the time frame specified will change the affected aircraft status symbol to a Red //X//.

NOTE

Commanders, Facility Managers, and Contractors at all levels, to include aircraft in DD 250 status, will not issue aircraft until they are in compliance with this message. Aircraft scheduled for transfer to the U.S. Government via DD Form 250 after the message DTG will not be accepted until in compliance with the message requirements.

NOTE

A listing of published safety messages, to include TAMMS Reports, Inspection Reports, and any Supplements/Addendums required by this message can be downloaded at: "https://asmprd.redstone.army.mil". This is a secure website which requires an Army Knowledge Online (AKO), "https://www.us.army.mil", user ID and password.

1. SUMMARY -

1.1. Background – Rolls Royce has issued a Commercial Service Letter (CSL) alerting Engine Model 250-C30R/3 operators that abnormal Seal wear in the Engine Turbine Section has the potential to create Engine debris which could result in an uncontained Engine failure. The CSL also alerts operators to listen for abnormal noise coming from the Engine Turbine Section during Engine coast down after shutdown. An uncorrectable decrease in the Power Assurance Check (PAC) Engine Torque Factor (ETF) Value can also be an initial indication of abnormal Seal wear or damage to the Second Stage Turbine Wheel. The decrease in ETF Value will be sudden and persistent even after Low Power Maintenance Correction Procedures are performed.

1.2. Message Purpose –

1.2.1. Brief crew members on the CSL and operational requirements during Engine shut down.

1.2.2. Require completion of a PAC prior to each flight.

1.2.3. Require a PAC torque factor trending for each installed Engine.

2. END ITEMS AFFECTED - All OH-58D series aircraft.

3. ASSEMBLIES/COMPONENTS/PARTS AFFECTED -

3.1. Suspect Assemblies/Components/Parts -

Nomenclature	PN	NSN
Second Stage Turbine Wheel	23032280	N/A

3.2. Additional Assemblies/Components/Parts Affected -

Nomenclature	PN	NSN
Engine, Aircraft, Turbo-Shaft	23065550	2840-01-444-3770

4. INITIAL AIRCRAFT TAMMS (THE ARMY MAINTENANCE MANAGEMENT SYSTEM) ENTRY -

NOTE

When complying with the requirements of this message, complete forms and records entries IAW DA PAM 738-751. ULLS-A units will use appropriate "E" forms.

Upon receipt of this message, make the following entry on DA Form 2408-13-1. Enter a Red Horizontal Dash //-// status symbol with the following statement: "Power Assurance Check required IAW H-58-12-SOF-01 prior to the next flight, but NLT 18 APR 12."

5. COMPLIANCE REPORTING REQUIREMENTS -

NOTE

Report compliance with this message, as defined below, via the AMCOM Message Tracking System (AMTRACKS) at "https://amtracks.redstone.army.mil". Unit personnel designated to submit compliance reports that have not registered with AMTRACKS, must establish a profile at this web site before submitting their compliance reports.

5.1. Aircraft Initial Compliance Report - All reporting requirements will be accomplished as part of the "Final Compliance Report".
5.2. Aircraft Final Compliance Report - Aircraft Final Compliance Report - Submit Final Compliance Report via AMTRACKS NLT 21 APR 12 IAW AR 750-6. This report will include Aircraft SN, MDS, and Date of Initial TAMMS Entry for all assigned aircraft. This report only confirms the unit has made the initial logbook entry.
5.3. Retail Stock Task/Inspection Compliance Report (Installation level and below) - N/A.
5.4. Wholesale Stock Task/Inspection Compliance Report (including Depot Stock, Depot Maintenance, and Overhaul/Repair Facilities) - N/A.

6. SPECIAL PROVISIONS TO MESSAGE REQUIREMENTS (AIRCRAFT) - Aircraft in Transit (Surface/Air Shipment/Ferry Status/ Aircraft Away From Home Station) - Unit Commanders unable to comply with the requirement specified in para 4 may defer making the initial Aircraft TAMMS entry until arrival at final destination. Adjust the date in the TAMMS Entry to be NLT 7 days after arrival at destination.

7. TECHNICAL PROCEDURES/INSTRUCTIONS -

NOTE

This message includes an optional Supplement. If the Supplement is not included with this message, it may be viewed/downloaded at "https://asmprd.redstone.army.mil". This is a secure website which requires an Army Knowledge Online (AKO), "https://www.us.army.mil", user ID and password.

NOTE

Requests for exceptions/deviations to this message will be submitted IAW AR 750-6. For assistance in requesting a waiver contact the AMCOM Safety POC in para 13.5.1.

NOTE

Unless otherwise stated, all maintenance tasks shall be performed IAW TM 1-2840-263-23.

NOTE

The urgency of certain emergencies requires immediate and instinctive action by the pilot. The most important single consideration is helicopter control. The information in this safety message is not intended to alter or supersede the Emergency Procedures as contained in Chapter 9 of TM 1-1520-248-10.

7.1. Unit Commanders will brief all applicable personnel on the content of this SOF.
7.2. Prior to the next and each subsequent flight, operators shall perform a PAC IAW the OH-58D Operator's Manual and Checklist. This inspection will continue until this message is rescinded or revised.
7.3. Operators shall record the PAC results for each flight. Referring to Slide 1 of the Supplement as a recommended example, record the daily PAC results for trending purposes.
7.4. Upon completion of each PAC, proceed to the PAC History Page and complete the following steps.
7.4.1. Note the 10th ETF Value from the top of the page. If there are not 10 values listed, note the last (oldest) ETF Value listed. The noted value will be considered the PAC "Initial Value". Slides 2 and 3 of the Supplement are examples of the PAC History Page and the PAC ETF Value listings.
7.4.2. Confirm the Julian Date for the "Initial Value" is the same or later than the Engine Install Date (Julian) listed on the PAC Daily Log created IAW para 7.2 of this SOF.

7.4.3. Compare the most recent PAC ETF Value at the top of the page with the "Initial Value".
7.4.3.1. If the most recent PAC shows a decrease in ETF Value greater than or equal to 0.10 from the "Initial Value", proceed to para 7.5.
7.4.3.2. If the most recent PAC shows less than a 0.10 ETF decrease, the inspection is complete. Proceed to para 7.7.
7.5. Clean the Engine Barrier Filters IAW Task 4-2-12, TM 1-1520-248-23, and complete the following steps.
7.5.1. Perform standard Engine troubleshooting IAW TM 1-1520-248-MTF, OH-58D Maintenance Test Flight Manual, Troubleshooting Guide E – Powerplant Condition, para E8, "Low Power Assurance."
7.5.2. Conduct a post troubleshooting PAC IAW the OH-58D Operator's Manual and Checklist.
7.5.3. If the PAC does not recover to 0.03 or less below the "Initial Value", proceed to para 7.6.
7.5.4. If PAC recovers to within 0.03 of the "Initial Value", proceed to para 7.7.
7.6. Conduct troubleshooting evaluation per TM 1-2840-263-23, Table 101, Item 14 "Low Power or High MGT".
7.6.1. If no corrections are made, proceed to para 7.6.2.2.
7.6.2. If additional corrections are made, conduct a post troubleshooting PAC.
7.6.2.1. If the PAC recovers to within 0.03 of the "Initial Value", proceed to para 7.7.
7.6.2.2. If no corrections were made, or the PAC does not recover to within 0.03 of the "Initial Value", contact the PM POC listed in para 13.2.1 or 13.2.2 of this SOF. Additional analysis/corrective procedures will vary for each engine, dependent on the information provided by the unit.
7.7. Engine Shutdown Procedures -
7.7.1. In addition to PAC trending, listen for abnormal noise coming from the Engine Turbine Section after each engine shutdown.
7.7.2. Abnormal noises could be caused by the presence of loose domestic debris in the Turbine Cavity and could likely be heard just prior to the stopping of N1 Shaft rotation. The abnormal noise is described as a "metal clinking" sound.
7.7.3. An alternative approach to conducting this inspection after engine shutdown is to conduct a "dry motor run" prior to first flight and allow the engine to coast down while listening for abnormal noises. A "dry motor run" consists of motoring the Engine with the Throttle closed and NOT TO EXCEED 10 percent Ng. The operator may accomplish this with the Ignition System deactivated (Exciter Circuit open). Do not exceed Starter limitations IAW para 5-9 of TM 1-1520-248-10.

WARNING

Due to the potential for Turbine Wheel failure and uncontained debris, personnel shall not position themselves in the plane of rotation of the Second Stage Turbine Wheel during Engine motoring or operation.

7.7.4. When operationally feasible, this inspection should be conducted by personnel placed along side of the aircraft to listen for noises.
7.7.5. If abnormal engine noise is heard, make the following entry on the DA Form 2408-13-1. Enter a Red //X// status symbol with the following statement: "Engine unserviceable IAW H-58-12-SOF-01." Prior to removal from the aircraft, the Engine will be properly diagnosed by a qualified Maintenance Pilot with the assistance of available Engine maintenance personnel. If it is determined the engine is unserviceable, dispose of IAW para 10.4 of this message.
7.8. After completion of the initial PAC, complete the following actions.
7.8.1. Make the following entry on the DA Form 2408-13-1. Enter a Red Horizontal Dash //-// status symbol with the following statement: "Engine Power Assurance Check required IAW H-58-12-SOF-01 during the next flight." Enter the status symbol and statement on the DA Form 2408-13-1 at the end of each flight. This inspection will continue until this message is rescinded or revised.
7.8.2. Clear the initial entry from para 4 and note compliance on the Commercial Engine Records.

8. PROCEDURES/INSTRUCTIONS FOR ASSEMBLIES/COMPONENTS/PARTS IN WORK OR IN STOCK (AT ALL LEVELS INCLUDING WAR RESERVES) – N/A.

9. SPECIAL TOOLS AND FIXTURES REQUIRED - N/A.

10. SUPPLY/PARTS (REQUISITION/DISPOSITION) -
10.1. Parts Required -

Nomenclature	PN/NSN	Qty	Cost ea.	Total$
Engine, Aircraft Turbo-Shaft	23065550 2840-01-444-3770	1	$532,655.00	$532,655.00
			Total cost per aircraft =	$532,655.00

10.2. Bulk and Consumable Materials - N/A.

NOTE

Project Code "X86" (X-ray Eight Six) is required to track and establish a data base of stock fund expenditures incurred by the field as a result of message actions.

10.3. Requisitioning Instructions - Requisition replacement parts using normal supply procedures. All requisitions shall use Project Code "X86".
10.4. Disposition of Discrepant Parts/Components - Unit will submit a Category "I" Product Quality Deficiency Report (CAT "I" PQDR). Contact the Rolls Royce Field Service Representative (FSR) for turn-in and shipping. If instructed to dispose of using normal supply procedures, all turn-in documents must include Project Code "X86".
10.5. Disposition of Hazardous Material - N/A.

11. MAINTENANCE APPLICATION -
11.1. Category of Maintenance - Field Level Maintenance.
11.2. Estimated Time Required -
11.2.1. Time to complete inspection - Total of 0.1 man-hour using 1 person.

NOTE

The time stated below does not include time for Maintenance Operational Checks or Test Flights.

11.2.2. Time for repair/replacement - Total of 16.0 man-hours using 2 persons

12. PUBLICATION REQUIREMENTS -
12.1. References -
12.1.1. AR 750-6.
12.1.2. DA Pam 738-751.
12.1.3. TM 1-1520-248-CL.
12.1.4. TM 1-1520-248-MTF.
12.1.5. TM 1-1520-248-10.
12.1.6. TM 1-1520-248-23.
12.1.7. TM 1-2840-263-23.
12.1.8. Rolls Royce CSL, Series IV FADEC Engine Turbine Inspection.
12.2. Publication Changes - N/A.

13. POINTS OF CONTACT -
13.1. Technical POCs -
13.1.1 Primary – Mr. Reggie Burton, DSN 897-9082 or 256-313-9082. Fax: DSN 897-2370 or 256-313-2370. Email: "reginald.t.burton@us.army.mil".
13.1.2 Alternate - Mr. Dennis Granger, DSN 897-4304 or 256-313-4304. Fax: DSN 788-6758 or 256-842-6758. Email: "dennis.granger@us.army.mil".
13.1.3. Alternate – Mr. Tim Snider (Avion Inc), DSN 897-2405 or 256-313-2405. Fax: DSN 788-6758 or 256-842-6758. Email: "timothy.snider@us.army.mil".

13.2. Project/Product Manager (PM) Office POCs -
13.2.1. Primary – Mr. Jeremy Turner, DSN 897-5524 or 256-313-5524. Fax: 645-7125 or 256-955-7125. Email: "jeremy.turner2@us.army.mil".
13.2.2. Alternate – Mr. Nirmal Singh, DSN 897-3399 or 256-313-3399. Fax: 645-7125 or 256-955-7125. Email: "nirmal.singh@us.army.mil".
13.2.3. Item Manager (250-C30R/3 Engine) – Ms. Linda King, DSN 897-1316 or 256-313-1316. Fax: DSN 645-7125 or 256-955-7125. Email: "linda.kay.king@us.army.mil".
13.4. Forms and Records POCs -
13.4.1. Primary - Ms. Renate Richters, DSN 46-2570 or 256-876-2570.
Email: "reds.tamms.a.policy@conus.army.mil" or "renate.richters@us.army.mil".
13.4.2. Alternate - Mr. Lloyd Willits, DSN 746-3598 or 256-876-3598.
Email: "reds.tamms.a.policy@conus.army.mil" or "lloyd.willits@us.army.mil".
13.5. AMCOM Safety POCs -
13.5.1. Safety (Primary) - Mr. Harry Trumbull, DSN 897-2095 or 256-313-2095. Email: "harry.trumbull@us.army.mil".
13.5.2. Safety (Alternate) - Mr. Don Swallom, DSN 788-8641 or 256-842-8641. Email: "donald.swallom@us.army.mil".
13.5.3. AMTRACKS (Primary) - Mr. Vic Mosley, DSN 788-8620 or 256-842-8620. Email: "safeadm@conus.army.mil" or "victor.mosley1@us.army.mil.
13.5.4. AMTRACKS (Alternate) - Ms. Teri Phipps, DSN 897-2097 or 256-313-2097. Email: "teri.phipps@us.army.mil".
13.6. After hours, contact the AMCOM Operations Center (AOC), DSN 897-2066/7 or 256-313-2066/7.